

Mini Review

Comamonas Testosteroni

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Abstract

Along these years are increasing the case reports of appendicitis linked with *Comamonas* species, a worldwide (environmental) distributed bacteria. Species of the genus *Comamonas* are opportunistic, and studies have been initiated on them and their potential as pathogens.

Keywords: Intraabdominal infections; Appendicitis; *Comamonas*

Introduction

Acute appendicitis is the most common cause of surgical urgency in both children and adults worldwide, being more frequent between the second and third decades of life, with a ratio of 1.4: 1 man to women, and an approximate incidence It is 233 / 100,000 inhabitants, being taller between the ages of 10 and 19, being responsible for approximately 60% of the acute surgical abdomen [1-5]. The genus *Comamonas* was described for the first time, in 1985, with a single species (*Comamonas terrigena*), it belongs to the family *Comamonadaceae*, (beta proteobacteria in pseudomonas rRNA homology group III), they are aerobic, gram-negative, mobile, pink pigmented bacilli, positive oxidase, which grow well in routine bacteriological media [6,7].

Discussion

Within the etiology of appendicitis, causes like parasites or inflammatory lymphoid hyperplasia are common, but the most predominant is undoubtedly the presence of fecaliths, which obstruct the lumen of the cecal appendix, increasing intraluminal pressure and consequent secondary inflammation. which determines the decrease in venous return locally and the subsequent compromise of arterial flow. The diagnosis of acute appendicitis is a challenge where, despite the use of biomarkers and imaging studies, clinical history plays a fundamental role [1-5].

About the *Comamonas* species recovered from cultures of the patients, it is important to comment that in 1987 when the species of *Pseudomonas acidovarans* and *Pseudomonas testosterone*, were reclassified as members of the genus *Comamonas* by techniques of genetics and molecular biology (later *C. acidovarans* was reassigned as part of the genus *Delftia*). The species of *Comamonas testosteroni* is a common bacterial agent in the environment but is not considered as part of the human microbiome, its name derives from the ability to use testosterone as a source of carbon instead of glucose [6-8]. The most-reported related infection of this pathogen is in immunocompromised patients, e.g., diabetes, advanced age, terminal renal disease necessitating hemodialysis, association with malignancy, liver disease, and intravenous drug use. And accord with literature is mostly identified in perforated appendicitis.

These microorganisms can be detected with classical methods of microbiology, however, methods such as MALDI-TOF, polymerase chain reaction and sequencing, allow the correct identification of the different species of these microorganisms, and allow establishing

a criterion for the onset of therapeutic scheme [7-14]. Cases of members of the genus *Comamonas* have been reported as causative agents of appendicitis, especially linked to appendicular perforation, and complication like peritonitis, or septic shock, as well as pneumonia, bacteremia, endocarditis, but despite this, it is still considered a rare pathogen in humans, and remains unrecognized, as part of the human microbiome, and are usually susceptible to "aminoglycosides, fluoroquinolones, carbapenems, piperacillin-tazobactam, trimethoprim-sulfamethoxazole, and cephalosporins [6-14].

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